participants from across the UK were asked to keep a diary of everything they ate and drank over four days. Diaries were coded and intake frequencies of foods derived using groups of nutritionally similar foods. For the 2% of participants who had three-day diaries, the frequencies were multiplied by 4/3. Principal component analysis (PCA) was performed on frequencies of consumption. Reduced-item prudent diet scores were calculated by multiplying coefficients for the ten most characteristic foods by each individual’s standardized reported frequency of consumption. Prudent diet scores calculated for both the full and 10-item prudent diet scores were standardised. Willing participants provided a blood sample; vitamin C status was measured on the BMG Labtech FLUOstar OPTIMA plate reader and beta carotene status by high performance liquid chromatography.

Results 6090 adults (aged 20 to 96 years) provided dietary data in the first eight years of the NDNS (2008–2016). PCA of intake frequencies of 126 food groups revealed a prudent diet pattern characterised by high intakes of wholesome bread, vegetables, fruit, water, oily fish, yoghurt and high-fibre breakfast cereals, and low intakes of white bread, sugar, sugar-sweetened soft drinks and chips. Pattern coefficients were very similar when analyses were conducted separately in males and females, and in those aged less than 65 and 65+ years. The 10-item prudent diet score was calculated based on foods with the five highest and five lowest coefficients. Spearman’s correlation between the full and 10-item prudent diet scores was 0.84. The mean difference between the full and 10-item prudent diet scores was 0.005SDs with Bland-Altman limits of agreement -1.89 to 1.89SDs. Notable correlations were seen between the full prudent diet score and vitamin C (r = 0.43) and beta-carotene status (r = 0.45); these were only slightly attenuated for the 10-item prudent diet score (r = 0.40, r = 0.38 respectively).

Conclusion A 10-item prudent diet score based on foods that characterise the prudent dietary pattern describes a healthy diet. A 10-item FFQ would have clear advantages for time and resources, and may provide an appropriate tool to describe UK diets while reducing participant burden.

**Health Inequalities 1**

**OP40 THE ASSOCIATION BETWEEN CHILDHOOD SOCIO-ECONOMIC POSITION AND ADVERSE CHILDHOOD EXPERIENCES (ACES): A SYSTEMATIC REVIEW**

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Methods Relevant databases (MEDLINE; psycINFO; ProQuest Public Health Database, Cochrane Library) were searched for all papers satisfying four inclusion criteria: (1) measurement of social position in childhood (prior to ACEs measurement); (2) measurement of multiple aspects of childhood adversity; (3) childhood adversity was the outcome; (4) statistical quantification of the relationship between childhood SEP and childhood adversity. Non-English language papers were excluded.

The initial search terms included ACES, SEP, and their synonyms. A second search additionally included ‘maltreatment’. Papers were independently screened and critically appraised by two authors. Risk of bias was assessed, and overall study quality calculated using a modified version of the Hamilton Tool. Results were synthesised narratively because of the wide variation in definitions of exposures and outcomes.

Results For the ACES-based search, 2,779 papers were screened, of which 52 were reviewed in full-text. Of these, only six were eligible for qualitative synthesis. The second search (including maltreatment) increased the numbers to: 4,463 papers screened; 166 full texts; 35 included for the analysis. Hazard ratios (HRs) were calculated in multivariable-adjusted Cox regression analyses, using a case-cohort approach.

**References**

1. D Walsh*, G McCartney, M Smith, G Armour. Glasgow Centre for Population Health, Glasgow, UK; Public Health Observatory, NHS Health Scotland, Glasgow, UK; Mental Health Services, NHS Greater Glasgow and Clyde, Glasgow, UK; Library and Knowledge Services, NHS Health Scotland, Glasgow, UK.
Background Several theoretical life course models (critical period, sensitive period, accumulation) have been proposed, all of which may be relevant for understanding of when and how socioeconomic inequalities in health arise. Our aim was to investigate whether the effect of socioeconomic position on all-cause mortality accumulates over the life course or if some periods of the life course are more important than others.

Methods We followed 3,951 men and 3,601 women born in Uppsala, Sweden, in 1915–1929 with known SEP at birth (age 0), during childhood (10 years), in adulthood (30–45 years) and in later life (50–65 years) from September 1980 until emigration, death, or until December 2010. Data on parents’ partner’s and own occupational status (a measure of SEP), marital status, deaths and emigrations were abstracted from birth records, parish records, school records, Census 1930 and routine registers. From the eligible sample who were alive and living in Sweden in September 1980 (n=11,336), 67% (n=7,552) had SEP recorded at all four-time points. We compared a set of nested Cox proportional regression models, each corresponding to a specific life course model (critical, sensitive and accumulation models), to a fully saturated model, to ascertain which model best describes the relationship between SEP and mortality. An alternative analysis employed latent class trajectories of SEP respectively. The sensitive period model indicated that being advantaged at age 10 appeared to be more protective than at birth for males, while there was no difference between SEP at birth and age 10 in their effect on all-cause mortality among women. Additional adjustments for marital status did not affect the results appreciably and main results were also consistent with analyses that employed latent class trajectories of SEP.

Conclusion Our results lead to a conclusion that an individual’s socio-economic position over the life course, including during early childhood does affect their risk of all-cause mortality in later life. These findings indicate that improvements in social conditions at any stage of the life course can contribute to reducing mortality at old age.